Prevalence of Metabolic Abnormalities in HIV Infected Patients Receiving Highly Active Antiretroviral Therapy and Antiretroviral-Naive Patients

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Objective: Metabolic abnormalities are common long-term side effects of antiretroviral treatment. In this study we investigated the prevalence of dyslipidemia and metabolic abnormalities in 2 groups of HIV-infected patients receiving highly active antiretroviral therapy (HAART) and antiretroviral-naive patients.

Methods: 40 HIV infected patients treated by HAART as a case group and 15 HIV naive, as a control group enrolled in this study. The two groups were well balanced with respect to age, sex, CD4 cell counts.

Results: Levels of total cholesterol, triglycerides, and lactate were elevated in 24%, 37%, and 25% of patients, respectively. The prevalence of elevated triglyceride and cholesterol levels was significantly higher among patients receiving antiretroviral therapy than it was among those who were not receiving treatment. Fasting hyperglycemia was noted in 11% of patients overall, but this was not significantly associated with antiretroviral treatment group. Low HDL levels were noted in 44.4% of patients overall, and this finding did not vary by treatment group. We found significant difference regarding mean of total cholesterol and LDL between treated group and controls ($P < 0.05$).No significant difference was observed in mean of HDL, Lactate and fasting blood sugar levels between each treated group and controls.

Conclusion: We concluded that in HIV infected patients with exposure to HAART, hyperlipidemia was a common metabolic complication. The prevalence of metabolic abnormalities in Iranian HIV-infected patients was similar to those reported for Western and Asian studies.

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HIV Infection, HAART, and Gynecomastia: Epidemiological, Clinical, and Pathogenetic Correlates

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Background: Gynecomastia (G) is an emerging untoward event in patients treated with HAART.

Patients and Methods: Through a cross-sectional study performed on around 1,000 HIV-infected patients (p) treated with antiretrovirals at our reference centre in Bologna (Italy),we identified all cases of G related to the administration of at least 12 consecutive months of HAART,to assess possible correlations of G with a spectrum of clinical,laboratory,and therapeutic variables (and including all adverse effects of HAART itself). All *p* with true G (as distinguished from lipomastia by an ultrasonography assay) were considered evaluable,while p with other predisposing conditions (endocrine disease,alcohol abuse,liver cirrhosis,and use of drug possibly predisposing to G), were carefully excluded.

Results: Twenty-one out of 616 evaluable HIV-infected male p (3.4% of our p population), developed a true G when aged 12—58 years. Seven p out of 21 never received protease inhibitor (PI)-containing therapies,while efavirenz-based regimens apparently prompted G in seven p who were naïve for PI,and worsened this disturbance in three further p who abandoned PI for efavirenz.Considering nucleoside analogues (NA), two p developed G during treatment conducted with dual isolated NA. Comparing the different administered NA,stavudine seemed to be the most commonly used compound, also taken for the longest time ($p < .01$).A complete hormonal workup did not detect significant abnormalities, save in one *p*, who had slight serum FSH,LH,and testosteron abnormalities (with normal prolactin levels).When considering the eventual correlation with the most common HAART-induced disturbances,some forms of lipodystrophy was concurrent in all the 21 *p* with G,while hypertriglyceridemia,hypercholesterolemia,and hyperglycemia were found in 15,9,and three *p*, respectively. During the subsequent 12—36-month follow-up, a spontaneous amelioration of G was never observed,notwithstanding eventual HAART modifications.Due to local hypersthesia,tenderness,and discomfort,two p resorted to surgery.

Conclusions: G is probably an underestimated problem in the setting of HAART.The frequent association of G with other HAART-related dysmetabolism suggests possible common pathogenetic causes.

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Symptomatic Hyperlactatemia and Lactic Acidosis at Tygerberg Hospital: Incidence, Characteristics, Clinical Manifestations, Outcomes and Safety of AZT Substitution for D4T

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Background: Higher incidences of symptomatic hyperlactatemia (SHL) and lactic acidosis (LA) have been reported

in South Africa where dideoxynucleosides are used as nucleoside backbones for HAART in the public sector. This study reviews the incidence, characteristics, analysis frequently reported symptoms and documents outcomes of SHL and LA.

Method: Retrospective cohort analysis was performed of 1175 adults (66.5% female) who started on ART from January 2004 to January 2007 at the Tygerberg Hospital Infectious Diseases Clinic. All patients with two lactate levels of >2,5 mmol/l and symptoms compatible with SHL during the study period were included in the analysis.

Results: A total of 79 patients presented with SHL (65 female). The overall incidence was 42 cases per 1000 patient- years. The incidence among female patients was 36.1 cases per 1000 p-y compared to 6.1 cases per 1000 p-y on treatment among male patients. 46 patients (58%) had lactate measurements of >5 mmol/l giving it and incidence of 22 cases per 1000 p-y. Two patients (2, 5%) died. Median age was 37 years, median baseline CD4 102 and median duration of ART was 11 months. The baseline median BMI was 24, 1. Seventeen (23, 6%) of 72 patients with SHL were obese (BMI > 30). All 79 patients were on d4T prior to developing SHL. Most frequently reported symptoms were weight loss (61%), nausea and vomiting 58%, abdominal pain or tenderness 55% and peripheral neuropathy occurred in 51% of patients. Of the 70 patients restarted or continued with AZT only 1 patient developed a recurrence.

Conclusion: A higher incidence was found as the cohort included the entire spectrum of SHL. The frequency of SHL was higher among women. The low mortality in this cohort is likely due to increased awareness of clinicians and due to inclusion of mild to moderate forms of SHL. AZT seems a safe alternative where NRTI options are limited. These findings mirror results found in other South African cohort in the public sector ARV roll-out program.

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Factors Contributing to ARVs Non Adherence Among PLWHA Attending CTC at Ligula Hospital in Mtwara Region Tanzania

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The Government of Tanzania launched ARV programme for PLHA since 2003, with the aim of decrease suppression of HIV replication, improve patient's survival and to reduce morbidity. At Ligula hospital in Mtwara Municipal where this study was conducted, the programme was introduced in June 2005. This dissertation attempts to describe a study conducted to identify the factors contributing to ARV non-adherence among PLHA attending CTC at Ligula hospital.

This study was under taken during October 2006 with 50 respondents who included 45 ARV users and five (5) service providers. The respondents were selected by using simple random sampling method. Data was collected by using a semi-structured questionnaire, and then data analysis was done manually.

Majority (60%) of respondents reported to have had failed to adhere to prescribed regimen. The reasons for non-adherence included; 55% lack of privacy, 44.4% long distance to hospital, 44.4% out of their home and 41% simply forgot 33.3% don't want to be notice, 25% alternative therapy, 15% side effect of drug. When reporting about non-adherence, the interviewed service providers mentioned the use of traditional medicine 80%, low capacity of client to understand 80% economic constraints 60%, lack of support 40%, long distance to clinic 20%, side effect 20%, and feels recovery 20%.

This study concludes that, factors for ARV's non-adherence are multi-factorial. These results are useful in planning interventions to promote medication adherence among clients receiving ARV at Ligula hospital and similar settings. Both clients and providers should be targeted by interventions aimed at improving adherence to ARVs.

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Extending the Durability of First-Line Antiretroviral Regimens: A Pilot Study of Directly Administered Antiretroviral Therapy

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Background: Due to limited regimen options in resource-limited settings, it is important to maximize the durability of response to first-line antiretroviral therapy in order to optimize patient outcomes and maintain lower program costs.

Objectives: To conduct a pilot study of initiation of a one-month period of directly administered antiretroviral therapy (DAART) for participants with suspected first-line treatment failure. The primary outcome was the change in CD4 lymphocyte count following DAART.

Methods: We conducted a prospective cohort study in Mombasa, Kenya between 2004 and 2007. We identified all women on ART who met WHO criteria for immunological treatment failure but were clinically stable. These women received four weeks of DAART, during which we directly administered the morning dose at the clinic for five days each week.

Results: Fourteen women resumed DAART. The median time to suspected treatment failure was 428 days (interquartile range [IQR], 333—819 days), and the median CD4 cell count at treatment failure was 152 cells/microliter (IQR, 112—232). Following one month of DAART, 5 women were diagnosed with treatment failure, while 9 women were no longer classified as failing. Among those who failed, the median CD4 counts were 153 cells/microliter (IQR, 63-